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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet	1	of	3	Attorney Docket Number	A-68718-2/RFT/RMS/RMK
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U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	1	4,882,013		Turner et al.	11/1989	
	2	4,964,972		Sagiv et al.	10/1990	
	3	5,064,618		Baker et al.	11/1991	
	4	5,505,321		Caron et al.	04/1996	
	5	5,066,372		Weetall	11/1991	
	6	5,519,635		Miyake et al.	05/1996	
	7	5,622,821		Selvin et al.	04/1997	
	8	5,650,061		Kuhr et al.	07/1997	
	9	5,694,932		Michel	12/1997	
	10	5,705,346		Okamoto et al.	01/1998	
	11	5,727,548		Hill et al.	03/1998	
	12	5,728,532		Ackley	03/1998	
	13	5,976,802		Ansorge et al.	11/1999	
	14	6,090,933		Kayyem et al.	07/2000	
	15	6,114,122		Besmer et al.	09/2000	
	16	6,153,737		Manoharan et al.	11/2000	
	17	6,197,515		Bamdad et al.	03/2001	
	18	6,203,758	B1	Marks et al.	03/2001	
	19	6,207,369	B1	Wohlstadter et al.	03/2001	
	20	6,221,583		Kayyem et al.	04/2001	

FOREIGN PATENT DOCUMENTS							
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		Office ³	Number ⁴ (if known)				
	21	WO	90/05303	A1	Pharmacia AB	05/1990	
	22	WO	97/46568	A1	California Institute of Technology	12/1997	
	23	WO	98/31839	A2	Presidents and Fellows of Harvard College	07/1998	
	24	WO	98/57158		Clinical Micro Sensors	12/1998	
	25	WO	99/33559	A1	Cepheid	07/1999	

Examiner Signature	7/31	Date Considered	6/23/2003
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Sheet 2 of 3 Attorney Docket Number A-68718-2/RFT/RMS/RMK

Complete if Known

Application Number	09/760,384
Filing Date	January 11, 2001
First Named Inventor	DUONG
Group Art Unit	1645
Examiner Name	Not Yet Assigned

Sheet 2 of 3

Attorney Docket Number A-68718-2/RFT/RMS/RMK

U.S. PATENT DOCUMENTS

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	26	6,232,062		Kayyem et al.	05/2001	
	27	6,258,545		Meade et al.	07/2001	
	28	6,268,149		Meade et al..	07/2001	
	29	6,268,150		Meade et al.	07/2001	
	30	6,277,576		Meade et al.	08/2001	
	31	6,300,141	B1	Segal		
	32	6,306,584		Bamdad	10/2001	
	33	6,322,979		Bamdad et al.	11/2001	
	34	20010034033	A1	Meade et al.	10/2001	
	35	20010046679	A1	Meade et al.	11/2001	

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Sheet 3 of 3

Complete if Known

Application Number	09/760,384
Filing Date	January 11, 200
First Named Inventor	DUONG
Group Art Unit	1645
Examiner Name	Not Yet Assigned

Attorney Docket Number A-68718-2/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examine Initials* **D** Cite No.¹ Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

39 Bain et al., "Formation of Monolayers by the Coadsorption of Thiols on Gold: Variation in the Length of the Alkyl Chain," *J. Am. Chem. Soc.* 111:7164-7175 (1989).

40 Bamdad, C. "A DNA self-assembled monolayer for the specific attachment of unmodified double - or single stranded DNA," *Biophysical Journal*, 75:1997-2003 (1988).

41 Beattie et al., "Genosensor Technology," *Clinical Chemistry*, 39(4): 719-722 (1993).

42 Ihara et al., "Gene sensor using ferrocenyl oligonucleotide," *Chem. Commun.*, 1609-1610 (1997).

43 Langen et al., "Electron Tunneling in Proteins: Coupling Through a $\beta\beta$ Strand," *Science*, 268:1733-1735, 1995.

44 McGee et al., "Novel Nucleosides via Intramolecular Functionalization of 2,2'-Anhydrouridine Derivatives," *Tetrahedron Letters*, 37(12) 1995-1998 (1996).

45 Moffatt. "Chemical Transformations of the Sugar Moity of Nucleosides," Contribution No. 527 from the Institute of Organic Chemistry, Syntex Research; 71-165 (1979).

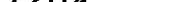
46 Mutz et al., "Conformational dependence of electron transfer across de novo designed metalloproteins," *Proc. Natl. Acad. Sci. USA*, 93:9521-9526, 1996.

47 Strobel, S. A., et al., "Site-Specific Cleavage of a Yeast Chromosome by Oligonucleotide-Directed Triple-Helix Formation," *Science*, 249:73-75 (1990).

48 Yu et al. "Uridine-conjugated-ferrocene DNA oligonucleotides for electronic detection of nucleic acids," *Abstracts of Papers. ACS National Meeting*, 217(1): 76 (1999).

49 Dontha et al., "Generation of Biotin/Avidin/Enzyme Nanostructures with Maskless Photolithography," *Anal. Chem.* 69:2619-2625 (1997).

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Examiner Signature  Date Considered 6/23/2003

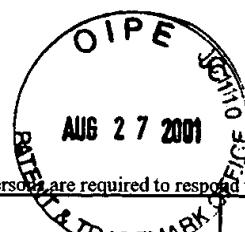
¹ Unique citation designation number. ² Applicant is to place a check mark here if English Language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet	1	of	13	Attorney Docket Number	A-68718-2/RFT/RMS/RMK
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Complete if Known

Application Number	09/760,384
Filing Date	January 11, 2001
First Named Inventor	Duong, H.
Group Art Unit	1645
Examiner Name	Not Yet Assigned

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
TD	1	4,707,352		Stavrianopoulos	11/1987	
TD	2	4,707,440		Stavrianopoulos	11/1987	
TD	3	4,711,955		Ward et al.	12/1987	
TD	4	4,755,458		Rabbani et al.	7/1988	
TD	5	4,840,893		Hill et al.	6/1989	
TD	6	4,849,513		Smith et al.	7/1989	
TD	7	4,868,103		Stavrianopoulos et al.	9/1989	
TD	8	4,894,325		Englehardt et al.	1/1990	
TD	9	4,943,523		Stavrianopoulos	7/1990	
TD	10	4,952,685		Stavrianopoulos	8/1990	
TD	11	4,994,373		Stavrianopoulos	2/1991	
TD	12	5,002,885		Stavrianopoulos	3/1991	
TD	13	5,013,831		Stavrianopoulos	5/1991	
TD	14	5,082,830		Brakel et al.	1/1992	
TD	15	5,175,269		Stavrianopoulos	12/1992	
TD	16	5,241,060		Englehardt et al.	8/1993	
TD	17	5,278,043		Bannwarth et al.	1/1995	
TD	18	5,312,527		Mikkelsen et al.	5/1994	

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴ (if known)				
TD	19	EP	0 234 938	A2	Cranfield Inst. of Tech.	2/1987	
TD	20	EP	0 229 943	B1	Molecular Biosystems Inc.	7/1987	
TD	21	EP	0 599 337	A2	Canon Kabushiki Kaisha	1/1994	
TD	22	EP	0 063 879	A2	Yale University	11/1982	
TD	23	EP	0 515 615		Boehringer Nannheim	9/1996	
TD	24	CA	2 090 904	A1	F. Hoffman-La Roche	9/1993	
TD	25	JP	238,166	A	Mitsubishi Corp.	1988	abstract
TD	26	JP	6-41183	A2	Mitsubishi Corp.	1994	

Examiner Signature	TB	Date Considered	6/23/2003
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<p>Substitute for form 1449A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>			
Sheet 2		of 13	Attorney Docket Number A-68718-2/RFT/RMS/RMK
<i>Complete if Known</i>			
Application Number		09/760,384	
Filing Date		January 11, 2001	
First Named Inventor		Duong, H.	
Group Art Unit		1645	
Examiner Name		Not Yet Assigned	

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		Number	Kind Code ² (if known)			
	27	5,328,824		Ward et al.	7/1994	
	28	5,403,451		Riviello et al.	4/1995	
	29	5,449,767		Ward et al.	9/1995	
	30	5,472,881		Beebe et al.	12/1995	
	31	5,476,928		Ward et al.	12/1995	
	32	5,552,270		Khrapko et al.	9/1996	
	33	5,565,552		Magda et al.	10/1996	
	34	5,573,906		Bannwarth et al.	11/1996	
	35	5,591,578		Meade et al.	1/1997	
	36	5,595,908		Fawcett et al.	1/1997	
	37	5,601,982		Sargent et al.	2/1997	
	38	5,620,850		Bamdad et al.	4/1997	
	39	5,705,348		Meade et al.	1/1998	
	40	5,741,700		Ershov et al.	4/1998	
	41	5756,050		Ershov et al.	5/1998	
	42	5,770,369		Meade et al.	6/1998	
	43	5,770,721		Ershov et al.	6/1998	
	44	5,776,672		Hashimoto et al.	7/1998	

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		Office ³	Number ⁴			
	45	WO	90/05732	A1	Columbia Univ.	5/1990
	46	WO	92/10757	A1	Boehringer Mannheim	6/1992
	47	WO	93/10267	A1	IGEN, Inc.	5/1993
	48	WO	94/22889	A1	Cis Bio International	10/1994
	49	WO	95/15971	A2	Calif. Inst. of Technology	6/1995
	50	WO	96/40712	A1	Calif. Inst. of Technology	12/1996

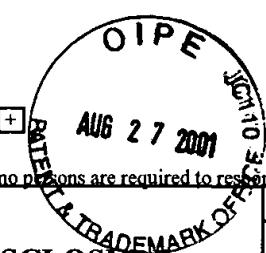
Examiner Signature	<i>[Signature]</i>	Date Considered	<i>6/23/2005</i>
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	51	5,780,234		Meade et al.	7/1998	
	52	5,824,473		Meade et al.	10/1998	
	53	5,851,772		Mirzabekov et al.	12/1998	
	54	5,952,172		Meade et al.	9/1999	
	55	4,945,045		Forrest et al.	07/1990	
	56	5,180,968		Bruckenstein et al.	01/1993	
	57	5,356,786		Heller et al.	10/1994	
	58	5,391,272		O'Daly et al.	02/1995	
	59	6,180,352		Meade et al.	01/2001	
	60	6,238,870		Meade et al.	05/2001	
	61	6,200,761		Meade et al.	03/2001	
	62	6,096,273		Kayyem et al.	08/2000	
	63	6,107,080		Lennox et al.	08/2000	

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	64	WO	97/01646	A2	Univ. of N. Carolina	1/1997
	65	WO	97/44651	A1	AU Membrane and	11/1997
	66	WO	97/27329	A1	Univ. of Chicago	7/1997
	67	WO	98/20162	A2	Clinical Micro Systems	5/1998
	68	WO	98/27229	A1	Univ. of Chicago	6/1998
	69	WO	98/28444	A2	Univ. of Chicago	7/1998
	70	WO	98/35232	A2	Univ. of N. Carolina	8/1998
	71	WO	98/57159	A1	Clinical Micro Systems	6/1997
	72	WO	99/67425	A2	Clinical Micro Systems	12/1999
	73	WO	99/14596	A1	AB Sangtec Medical	3/1999

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 14 of 13

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	74	4,704,193		Bowers et al.	11/1987	
	75	5,089,112		Skotheim et al.	02/10992	
	76	5,436,161		Bergstrom et al.	07/1995	
	77	5,443,701		Willner et al.	08/1995	
	78	5,242,828		Bergstrom et al.	09/1993	
	79	5,795,453		Gilmartin	08/1998	
	80	6,060,023		Maracas	05/2000	
	81	6,060,327		Keen	05/2000	
	82	6,071,699		Meade et al.	06/2000	
	83	6,087,100		Meade et al.	07/2000	
	84	6,177,250		Meade et al.	01/2001	
	85	4,787,963		MacConnell	11/1988	
	86	5,571,568		Ribi et al.	11/1996	
	87	5,632,957		Heller et al.	05/1997	
	88	5,700,667		Marble et al.	12/1997	
	89	5,837,859		Teoule et al.	11/1998	
	90	5,849,486		Heller et al.	12/1998	
	91	6,096,825		Garnier	08/2000	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴ (if known)				
	92	WO	97/41425				
	93	WO	99/37819	A2	Clinical Micro Systems	07/1999	
	94	WO	86/05815			03/1985	
	95	WO	93/22678			11/1993	
	96	WO	97/31256			08/1997	
	97	WO	98/51823			11/1998	
	98	WO	98/57319			11/1999	
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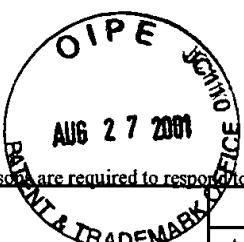
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	09/760,384
Sheet	5	of	13	Filing Date	January 11, 2001
				First Named Inventor	Duong, H.
				Group Art Unit	1645
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	A-68718-2/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	101	Aizawa et al., "Integrated Molecular Systems for Biosensors," <i>Sensors and Acuators B</i> , B@\$ (Nos 1/3) Part 1:1-5 (March 1995).	
	102	Albers et al., "Design of Novel Molecular Wires for Realizing Long-Distance Electron Transfer," <i>Biochemistry and Bioenergetics</i> , 42:25-33 (1997).	
	103	Alleman, K.S., et al., "Electrochemical Rectification at a Monolayer-Modified Electrode," <i>J. Phys. Chem.</i> , 100:17050-17058 (1996).	
	104	Arkin et al. "Evidence for Photoelectron Transfer Through DNA Intercalation," <i>J. Inorganic Biochem. Abstracts</i> , 6th International Conference on Bioinorganic Chemistry, 51(1) & (2):526 (1993).	
	105	Barisci et al., "Conducting Polymer Sensors," <i>TRIP</i> , 4(9):307-311 (1996).	
	106	Baum, R. M., "Views on Biological, Long-Range Electron Transfer Stir Debate," <i>C&EN</i> , pp 20-23 (1993).	
	107	Bechtold, R., et al., "Ruthenium-Modified Horse Heart Cytochrome c: Effect of pH and Ligation on the Rate of Intramolecular Electron Transfer between Ruthenium(II) and Heme(III)," <i>J. Phys. Chem.</i> , 90(16):3800-3804 (1986).	
	108	Bidan, "Electroconducting conjugated polymers: new sensitive matrices to build up chemical or electrochemical sensors. A Review," <i>Sensors and Actuators</i> , B6:45-56 (1992).	
	109	Biotechnology and Genetics: Genetic Screening Integrated Circuit," <i>The Economist</i> (February 25-March 3, 1995).	
	110	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," <i>Chem. Commun.</i> 1393-1394 (1998).	
	111	Boguslavsky, L. et al., "Applications of redox polymers in biosensors," <i>Solid State Ionics</i> , 60:189-197 (1993).	
	112	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," <i>Progress in Inorganic Chemistry: Bioinorganic Chemistry</i> , 38:259-322 (1990).	
	113	Brun, A. M., et al., "Photochemistry of Intercalated Quaternary Diazaaromatic Salts," <i>J. Am. Chem. Soc.</i> , 113:8153-8159 (1991).	
	114	Bumm, et al., "Are Single Molecular Wires Conducting?," <i>Science</i> 271:1705-1707 (1996).	
	115	Cantor, C.R. et al., "Report on the Sequencing by Hybridization Workshop," <i>Genomics</i> , 13:1378-1383 (1992).	
	116	Carr et al., "Novel Electrochemical Sensors for Neutral Molecules," <i>Chem. Commun.</i> , 1649-1650 (1997).	
	117	Carter et al., "Voltammetric Studies of the Interaction of Metal Chelates with DNA. 2. Tris-Chelated Complexes of Cobalt(III) and Iron(II) with 10-Phenanthroline and 2,2'-Bipyridine," <i>J. Am. Chem. Soc.</i> , 111:8901-8911 (1989).	

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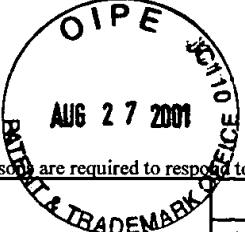
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	118	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocytocrome c by Ru(2,2'-bpy) ₂ (im)(His-33) ³⁺ ," <i>J. Am. Chem. Soc.</i> , 113:7056-7057 (1991).	
	119	Chidsey, et al., "Coadsorption of Ferrocene-Terminated and Unsubstituted Alkanethiols on Gold" <i>Electroactive Self-Assembled Monolayers</i> , <i>J. Am. Chem. Soc.</i> , 112:4301-4306 (1990).	
	120	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," <i>Science</i> , 251:919-922 (1991).	
	121	Chrisey, et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," <i>Nucleic Acids Research</i> , 24(15):3031-3039 (1996).	
	123	Clery, "DNA Goes Electric," <i>Science</i> , 267:1270 (1995).	
	124	<i>Commerce Business Daily Issue</i> of September 26, 1996 PSA#1688.	
	125	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsacrine as Studied by Fluorescence Quenching of DNA-Bound	
	126	Davis, L. M., et al., "Elements of biosensor construction," <i>Enzyme Microb. Technol.</i> 17:1030-1035 (1995).	
	127	Degani et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 2. Methods for Bonding Electron-Transfer Relays to Glucose Oxidase and D-Amino-Acid Oxidase," <i>J. Am. Chem. Soc.</i> 110:2615-2620 (1988).	
	128	Degani, Y., et al., "Electrical Communication between Redox Centers of Glucose Oxidase and Electrodes via Electrostatically and Covalently Bound Redox Polymers," <i>J. Am. Chem. Soc.</i> , 111:2357-2358 (1989).	
	129	Degani, Y., et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 1. Electron Transfer from Glucose Oxidase to Metal Electrodes via Electron Relays, Bound Covalently to the Enzyme," <i>J. Phys. Chem.</i> , 91(6):1285-1288 (1987).	
	130	Deinhammer, R.S., et al., "Electronchemical Oxidation of Amine-containing compounds: A Route to the Surface Modification of glassy carbon electrodes," <i>Langmuir</i> , 10:1306-1313 (1994).	
	131	Dreyer, G. B., et al., "Sequence-specific cleavage of single-stranded DNA: Oligodeoxynucleotide-EDTA·Fe(II)," <i>Proc. Natl. Acad. Sci. USA</i> , 82:968-972 (1985).	
	132	Drobyshev, A. et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of β -thalassemia Mutations," <i>Gene</i> , 188:45-52 (1997).	
	133	Dubiley, S. et al., "Fractionation, phosphorylation and Ligation on Oligonucleotide Microchips to Enhance Sequencing by Hybridization," <i>Nucleic Acids Research</i> , 25(12):2259-2265 (1997).	
	134	Durham, B., et al., "Electron-Transfer Kinetics of Singly Labeled Ruthenium(II) Polypyridine Cytochrome c Derivatives," <i>Advances in Chemistry Series</i> , 226:181-193 (1990).	

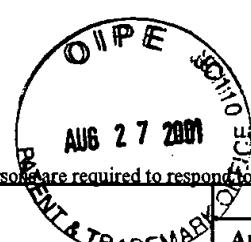
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Sheet	7	of	13
		Attorney Docket Number A-68718-2/RFT/RMS/RMK	

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	135	Durham, B., et al., "Photoinduced Electron-Transfer Kinetics of Singly Labeled Ruthenium Bis(bipyridin) Dicarboxybipyridine Cytochrome <i>c</i> Derivatives," <i>Biochemistry</i> , 28:8659-8665 (1989).
	136	Elghanian et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-Dependent Optical Properties of Gold Nanoparticles," <i>Science</i> , 277:1078-1081 (1997).
	137	Elias, H., et al., "Electron-Transfer Kinetics of Zn-Substituted Cytochrome <i>c</i> and Its Ru(NH ₃) ₅ (Histidine-33) Derivative," <i>J. Am. Chem. Soc.</i> , 110:429-434 (1988).
	138	Farver, O., et al., "Long-range intramolecular electron transfer in azurins," <i>Proc. Natl. Acad. Sci. USA</i> , 86:6968-6972 (1989).
	139	Fotin, A. et al., "Parallel Thermodynamic Analysis of Duplexes on Oligodeoxyribonucleotide Microchips," <i>Nucleic Acids Research</i> , 216(6):1515-1521 (1998).
	140	Fox, M. A., et al., "Light-Harvesting Polymer Systems," <i>C&EN</i> , pages 38-48 (March 15, 1993).
	141	Fox, L. S., et al., "Gaussian Free-Energy Dependence of Electron-Transfer Rates in Iridium Complexes," <i>Science</i> , 247:1069-1071 (1990).
	142	Francois, J-C., et al., "Periodic Cleavage of Poly(dA) by Oligothymidylates Covalently Linked to the 1,10-Phenanthroline-Copper Complex," <i>Biochemistry</i> , 27:2272-2276 (1988).
	143	Friedman, A. E., et al., "Molecular 'Light Switch' for DNA: Ru(bpy) ₂ (dppz) ²⁺ ," <i>J. Am. Chem. Soc.</i> , 112:4960-4962 (1990).
	144	Fromherz, P., et al., "Photoinduced Electron Transfer in DNA Matrix from Intercalated Ethidium to Condensed Methylviologen," <i>J. Am. Chem. Soc.</i> , 108:5361-5362 (1986).
	145	Gardner, et al., "Application of conducting polymer technology in microsystems," <i>Sensors and Actuators</i> , A51:57-66 (1995).
	146	Gregg, B. A., et al., "Redox Polymer Films Containing Enzymes. 1. A Redox-Conducting Epoxy Cement: Synthesis, Characterization, and Electrocatalytic Oxidation of Hydroquinone," <i>J. Phys. Chem.</i> , 95:5970-5975 (1991).
	147	Gregg, B. A., et al., "Cross-linked redox gels containing glucose oxidase for amperometric biosensor applications," <i>Anal. Chem.</i> , 62:258-263 (1990).
	148	Guschin, D. et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," <i>Analytical Biochemistry</i> , 250:203-211 (1997).
	149	Guschin, D. et al., "Oligonucleotide Microchips as Genosensors for Determinative and Environmental Studies in Microbiology," 63(6):2397-2402 (1997).
	150	Hashimoto, et al., "Sequence-Specific Gene Detection with a Gold Electrode Modified with DNA Probes and an Electrochemically Active Dye," <i>Anal. Chem.</i> 66:3830-3833 (1994).
	151	Hegner, et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," <i>FEBS</i> 336(3):452-456 (1993).

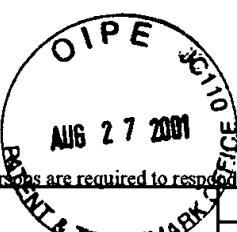
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Application Number	09/760,384		
Filing Date	January 11, 2001		
First Named Inventor	Duong, H.		
Group Art Unit	1645		
Examiner Name	Not Yet Assigned		
Sheet	8	of	13
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	152	Heller, A., "Electrical Wiring of Redox Enzymes," <i>Acc. Chem. Res.</i> , 23:128-134 (1990).	
	153	Heller et al., "Fluorescent Energy Transfer Oligonucleotide Probes," <i>Fed. Proc.</i> 46(6):1968 (1987) Abstract No. 248.	
	154	Heller, A., et al., "Amperometric biosensors based on three-dimensional hydrogel-forming epoxy networks," <i>Sensors and Actuators</i> , 13-14:180-183 (1993).	
	155	Ho "DNA-Mediated Electron Transfer and Application to 'Biochip' Development," <i>Abstract. Office of Naval Research</i> (Report Date: July 25, 1991) 1-4, RR04106.	
	156	Hobbs et al., "Polynucleotides Containing 2'-Amino-2'deoxyribose and 2'-Azido-2'-deoxyribose," <i>Biochemistry</i> , 12(25):5138-5145 (1973).	
	157	Hsung, et al., "Thiophenol Protecting Groups for the Palladium-Catalyzed Heck Reaction: Efficient Syntheses of Conjugated Arylthiols," <i>Tetrahedron Letters</i> . 36(26):4525-4528 (1995).	
	158	Hsung, et al., "Synthesis and Characterization of Unsymmetric Ferrocene-Terminated Phenylethynyl Oligomers," <i>Organometallics</i> , 14:4808-4815 (1995).	
	159	Jenkins et al., "A Sequence-Specific Molecular Light Switch: Tebhering of an Oligonucleotide to a Dipyridophenazine Complex of Ruthenium (II)," <i>J. Am. Chem. Soc.</i> , 114:8736-8738 (1992).	
	160	Johnston et al., "Trans-Dioxorhenium(V)-Mediated Electrocatalytic Oxidation of DNA at Indium Tin-Oxide Electrodes: Voltammetric Detection of DNA Cleavage in Solution," <i>Inorg. Chem.</i> , 33:6388-6390 (1994).	
	161	Kamat et al., <i>J. Phys. chem.</i> , 93(4):1405-1409 (1989). Abstract	
	162	Katritzky, et al., "Pyridylethylation - A New Protection Method for Active Hydrogen Compounds," <i>Tetrahedron Letters</i> , 25(12):1223-1226 (1984).	
	163	Kelley, S.O. and J.K. Barton, "Electrochemistry of Methylene Blue Bound to a DNA-Modified Electrode," <i>Bioconjugate Chem.</i> , 8:31-37 (1997).	
	164	Kojima et al., "A DNA Probe of Ruthenium Bipyridine Complex Using Photocatalytic Activity," <i>Chemistry Letter</i> , pp 1889-1982 (1989).	
	165	Korri-Youssoufi et al., "Toward Bioelectronics: Specific DNA Recognition Based on an Oligonucleotide-Functionalized Polypyrrole," <i>J. Am. Chem. Soc.</i> , 119(31):7388-7389 (1997).	
	166	Laviron, E., "A.C. Polarography and Faradaic Impedance of Strongly Adsorbed Electroactive Species. Part I: Theoretical and Experimental Study of a Quasi-Reversible Reaction in the Case of a Langmuir Isotherm," <i>J. Electroanal. Chem.</i> , 97:135-149 (1979).	
	167	Laviron, E., "A.C. Polarography and Faradaic Impedance of Strongly Adsorbed Electroactive Species. Part III: Theoretical Complex Plane Analysis for a Surface Redox Reaction," <i>J. Electroanal. Chem.</i> , 105:35-42 (1979).	
	168	Lee, et al., "Direct Measurement of the Forces Between Complementary Strands of DNA," <i>Science</i> , 266:771-773 (1994).	

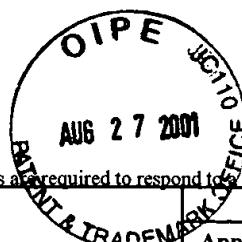
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	169	Lenhard, J.R., et al., "Part VII Covalent Bonding of a Reversible- Electrode Reactant to Pt Electrodes Using an organosilane Reagent" <i>J. Electronal. Chem.</i> , 78:195-201 (1977).	
	170	Lincoln et al., "Shorting Circuiting the Molecular Wire," <i>J. Am. Chem. Soc.</i> , 119(6):1454-1455 (1997).	
	171	Lipkin "Identifying DNA by the Speed of Electrons," <i>Science News</i> , 147(8):117 (1995).	
	172	Livshits, M. et al., "Theoretical Analysis of the Kinetics of DNA Hybridization with Gel-Immobilized Oligonucleotides," <i>Biophysical Journal</i> , 71:2795-2801 (1996).	
	173	Maskos, et al., "Oligonucleotide hybridisations on glass supports: a novel linker for oligonucleotide synthesis and hybridisation properties of oligonucleotides synthesised <i>in situ</i> ," <i>Nucleic Acids Research</i> , 20(7):1679-1684 (1992).	
	174	McGee, et al., "2'-Amino-2'-deoxyuridine <i>via</i> an Intramolecular Cyclization of a Trichloroacetimidate," <i>J. Org. Chem.</i> , 61:781-785 (1996).	
	175	Meade, T. J., et al., "Electron Transfer through DNA: Site-Specific Modification of Duplex DNA with Ruthenium Donors and Acceptors," <i>Angew Chem. Int. Ed. Engl.</i> , 34:352-354 (1995).	
	176	Meade, T. J., "Driving-Force Effects on the Rate of Long-Range Electron Transfer in Ruthenium-Modified Cytochrome c," <i>J. Am. Chem. Soc.</i> , 111:4353-4356 (1989).	
	177	Mestel, "Electron Highway' Points to Identity of DNA," <i>New Scientist</i> , p. 21 (1995).	
	178	Millan, K.M. and Mikkelsen, S.R., "Sequence-Selective Biosensor for DNA Based on Electroactive Hybridization Indicators," <i>Anal. Chem.</i> , 65:2317-2323 (1993).	
	179	Millan, K.M., et al., "Covalent Immobilization of DNA onto Glassy Carbon Electrodes," <i>Electroanalysis</i> , 4(10):929-932 (1992).	
	180	Millan, et al., "Voltammetric DNA Biosensor for Cystic Fibrosis Based on a Modified Carbon Paste Electrode," <i>Anal. Chem.</i> , 66:2943-2948 (1994).	
	181	Miller, C., "Absorbed ω -Hydroxy Thiol Monolayers on Gold Electrodes: Evidence for Electron Tunneling to Redox Species in Solution," <i>J. Phys. Chem.</i> , 95:877-886 (1991).	
	182	Mirkin et al., "A DNA-based Method for Ratioally Assembling Nonparticles into Macroscopic Materials," <i>Nature</i> , 382:607-609 (1996).	
	183	Mirzabekov, A. et al., "Dna Sequencing by Hybridization - a Megasequencing Method and a Diagnostic Tool," <i>Tibtech</i> , 12:27-32 (1994).	
	184	Mitchell et al., "Programmed Assembly of DNA Functionalized Quantum Dots," <i>J. Am. Chem. Soc.</i> , 121:8122-8123 (1999).	

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				Application Number	09/760,384
				Filing Date	January 11, 2001
				First Named Inventor	Duong, H.
				Group Art Unit	1645
				Examiner Name	Not Yet Assigned
Sheet	10	of	13	Attorney Docket Number	A-68718-2/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
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	185	Mucic et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," <i>J. Am. Chem. Soc.</i> , 120:12674-12675 (1998).			
	186	Murphy, C. J., et al., "Long-Range Photoinduced Electron Transfer Through a DNA Helix," <i>Science</i> , 262:1025-1029 (1993).			
	187	Orellana, G., et al., "Photoinduced Electron Transfer Quenching of Excited Ru(II) Polypyridyls Bound to DNA: The Role of the Nucleic Acid Double Helix," <i>Photochemistry and Photobiology</i> , 54(4):499-509 (1991).			
	188	Palecek, "From Polarography of DNA to Microanalysis with Nucleic Acid-Modified Electrodes," <i>Electroanalysis</i> , 8(1):7-14 (1996).			
	189	Parinov, S., "DNA Sequencing by Hybridization to Microchip octa- and Decanucleotides Extended by Stacked Pentanucleotides," <i>Nucleic Acids Research</i> , 24(15):2998-3004 (1996).			
	190	Paterson, "Electric Genes: Current Flow in DNA Could Lead to Faster Genetic Testing," <i>Scientific American</i> , 273 (May 1995).			
	191	Proudnikov, D. "Immobilization of DNA in Polyacrylamide Gel for the manufacture of DNA and DNA-Oligonucleotide Microchips," <i>Analytical Biochemistry</i> , 259:34-41 (1998).			
	192	Proudnikov, D. et al., "Chemical Methods of DNA and RNA Fluorescent Labeling," <i>Nucleic Acids Research</i> , 24(22):4535-4542 (1996).			
	193	Purugganan, M. D., et al., "Accelerated Electron Transfer Between Metal Complexes Mediated by DNA," <i>Science</i> , 241:1645-1649 (1988).			
	194	Reimers et al., "Toward Efficient Molecular Wires and Switches: the Brooker Ions," <i>Biosystems</i> , 35:107-111 (1995).			
	195	Rhodes, D. And A. Klug, "Helical Periodicity of DNA Determined by Enzyme Digestion," <i>Nature</i> , 286:573-578 (1980).			
	196	Risser, S. M., et al., "Electron Transfer in DNA: Predictions of Exponential Growth and Decay of Coupling with Donor-Acceptor Distance," <i>J. Am. Chem. Soc.</i> , 115(6):2508-2510 (1993).			
	197	Sato, Y., et al., "Unidirectional Electron Transfer at Self-Assembled Monolayers of 11-Ferrocenyl-1-undecanethiol on Gold," <i>Bull. Chem. Soc. Jpn.</i> , 66(4):1032-1037 (1993).			
	198	Satyanarayana, S., et al., "Neither Δ - nor Λ -Tris(phenanthroline)ruthenium(II) Binds to DNA by Classical Intercalation," <i>Biochemistry</i> , 31(39):9319-9324 (1992).			
	199	Schreiber, et al., "Bis(purine) Complexes of <i>trans</i> -a ₂ Pt ^{II} . Preparation and X-ray Structures of Bis(9-methyladenine) and Mixed 9-Methyladenine, 9-Methylguanine Complexes and Chemistry Relevant to Metal-Modified Nucleobase Triples and Quartets," <i>J. Am. Chem. Soc.</i> 118:4124-4132 (1996).			
	200	Schuhmann, W., et al., "Electron Transfer between Glucose Oxidase and Electrodes via Redox Mediators Bound with Flexible Chains to the Enzyme Surface," <i>J. Am. Chem. Soc.</i> , 113:1394-1397 (1991).			

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Application Number	09/760,384				
Filing Date	January 11, 2001				
First Named Inventor	Duong, H.				
Group Art Unit	1645				
Examiner Name	Not Yet Assigned				
Sheet	11	of	13	Attorney Docket Number	A-68718-2/RFT/RMS/RMK

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	201	Schumm, et al., "Iterative Divergent/Convergent Approach to Linear Conjugated Oligomers by Successive Doubling of the Molecular Length: A Rapid Route to a 128 Å-Long Potential Molecular Wire," <i>Angew. Chem. Int. Ed. Engl.</i> , 33(11):1360-1363 (1994).	
	202	Sigal et al., "A Self-Assembled Monolayer for the Binding and Study of Histidine-Tagged Proteins by Surface Plasmon Resonance," <i>Anal. Chem.</i> , 68(3):490-497 (1996).	
	203	Sloop et al., "Metalloorganic labels for DNA sequencing and mapping," <i>New. J. Chem.</i> , 18: 317-326 (1994).	
	204	Southern, et al., "Arrays of complementary oligonucleotides for analysing the hybridisation behaviour of nucleic acids," <i>Nucleic Acids Research</i> , 22(8):1368-1373 (1994).	
	205	Storhoff et al., "One-Pot Colorimetric Differentiation of Polynucleotides with Single Base Imperfections Using Gold Nanoparticles Probes," <i>J. Am. Chem. Soc.</i> , 120:1959-1964 (1998).	
	206	Strobel, S. A., et al., "Site-Specific Cleavage of a Yeast Chromosome by Oligonucleotide-Directed Triple-Helix Formation," <i>Science</i> , 249:73-75 (1990).	
	207	Su, et al., "Interfacial Nucleic Acid Hybridization Studied by Random Primer ³² P Labelling and Liquid-Phase Acoustic Network Analysis," <i>Analytical Chemistry</i> , 66(6):769-777 (1994).	
	208	Telser, J., et al., "DNA Oligomers and Duplexes Containing a Covalently Attached Derivative of Tris(2,2'-bipyridine)ruthenium(II): Synthesis and Characterization by Thermodynamic and Optical Spectroscopic Measurements," <i>J. Am. Chem. Soc.</i> , 111:7221-7226 (1989).	
	209	Telser, J., et al., "DNA Duplexes Covalently Labeled at Two Sites: Synthesis and Characterization by Steady-State and Time-Resolved Optical Spectroscopies," <i>J. Am. Chem. Soc.</i> , 111:7226-7232 (1989).	
	210	Timofeev, E. et al., "Regioselective Immobilization of Short Oligonucleotides to Acrylic Copolymer Gel," <i>Nucleic Acids Research</i> , 24(16): 3142-3148 (1996).	
	211	Timofeev, E. et al., "Methidium Intercalator Inserted into Synthetic Oligonucleotides," <i>Tetrahedron Letters</i> , 37(47):8467-8470 (1996).	
	212	Tour, "Conjugated Macromolecules of Precise Length and Constitution. Organic Synthesis for the Construction of Nanoarchitectures," <i>Chem. Rev.</i> , 96:537-553 (1996).	
	213	Tour, et al., "Self-Assembled Monolayers and Multilayers of Conjugated Thiols, α - ω -Dithiols, and Thioacetyl-Containing Adsorbates. Understanding Attachments between Potential Molecular Wires and Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 117:9529-9534 (1995).	
	214	Tullius, T.D. and B.A. Dombroski, "Iron(II) EDTA Used to Measure the Helical Twist Along Any DNA Molecule," <i>Science</i> , 230:679-681 (1985).	
	215	Turro, N. J., et al., "Molecular Recognition and Chemistry in Restricted Reaction Spaces. Photophysics and Photoinduced Electron Transfer on the Surfaces of Micelles, Dendrimers, and DNA," <i>Acc. Chem. Res.</i> , 24:332-340 (1991).	

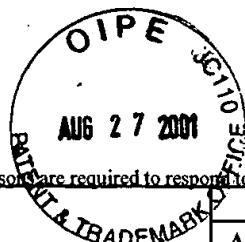
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	216	Turro, N., et al. "Photoelectron Transfer Between Molecules Adsorbed in Restricted Spaces," <i>Photochem. Convers. Storage Sol. Energy, Proc. Int. Conf.</i> , 8th, pp 121-139 (1990).	
	217	Uosake, K., et al., "A Self-Assembled Monolayer of Ferrocenylalkane Thiols on Gold as an Electron Mediator for the Reduction of Fe(III)-EDTA in Solution," <i>Electrochimica Acta.</i> , 36(11/12):1799-1801 (1991).	
	218	Van Ness, J., et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-Based Hybridization Assays," <i>Nucleic Acids Research</i> , 19(12):3345-3350 (1991).	
	219	Velev et al., "In Situ Assembly of Colloidal Particles into Miniaturized Biosensors," <i>The ACS Journal of Surfaces and Colloids, Langmuir</i> , 15(11):3693-3698 (1999).	
	220	Watson et al., "Hybrid Nanoparticles with Block Copolymer Shell Structures," <i>J. Am. Chem. Soc.</i> , 121:462-463 (1999).	
	221	Weber, et al., "Voltammetry of Redox-Active Groups Irreversibly Adsorbed onto Electrodes. Treatment Using the Marcus Relation between Rate and Overpotential," <i>Anal. Chem.</i> , 66:3164-3172 (1994).	
	222	Williams, et al., "Studies of oligonucleotide interactions by hybridisation to arrays: the influence of dangling ends on duplex yield," <i>Nucleic Acids Research</i> , 22(8):1365-1367 (1994).	
	223	Winkler, J. R., et al., "Electron Transfer in Ruthenium-Modified Proteins," <i>Chem. Rev.</i> , 92:369-379 (1992).	
	224	Xu, et al., "Immobilization and Hybridization of DNA on an Aluminum(III) Alkanebisphosphonate Thin Film with Electrogenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 117:2627-2631 (1995).	
	225	Xu, et al., "Immobilization of DNA on an Aluminum(III) alkaneobisphosphonate Thin Film with Electrogenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 116:8386-8387 (1994).	
	226	Yang, et al., "Growth and Characterization of Metal(II) Alkaneobisphosphonate Multilayer Thin Films on Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 115:11855-11862 (1993).	
	227	Yershov, G. et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," <i>Proc. Natl. Acad. Sci. USA</i> , 93:4913-4918 (1996).	
	228	Zhou, et al., "Fluorescent Chemosensors Based on Energy Migration in Conjugated Polymers: The Molecular Wire Approach to Increased Sensitivity," <i>J. Am. Chem. Soc.</i> , 117:12593-12602 (1995).	
	229	Boon et al., "Mutation Detection by Electrocatalysis at DNA- Modified Electrodes," <i>Nature Biotechnology</i> , 18: 1096-1100 (October 2000).	

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